

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: LUMARK

Report Number: P882800

Luminaire Tested: **NAV-SB2D-830-U-T4FT-HSS**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P882800  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-25)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB2D-830-U-T4FT-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(2) 80 CRI, 3000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV  
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

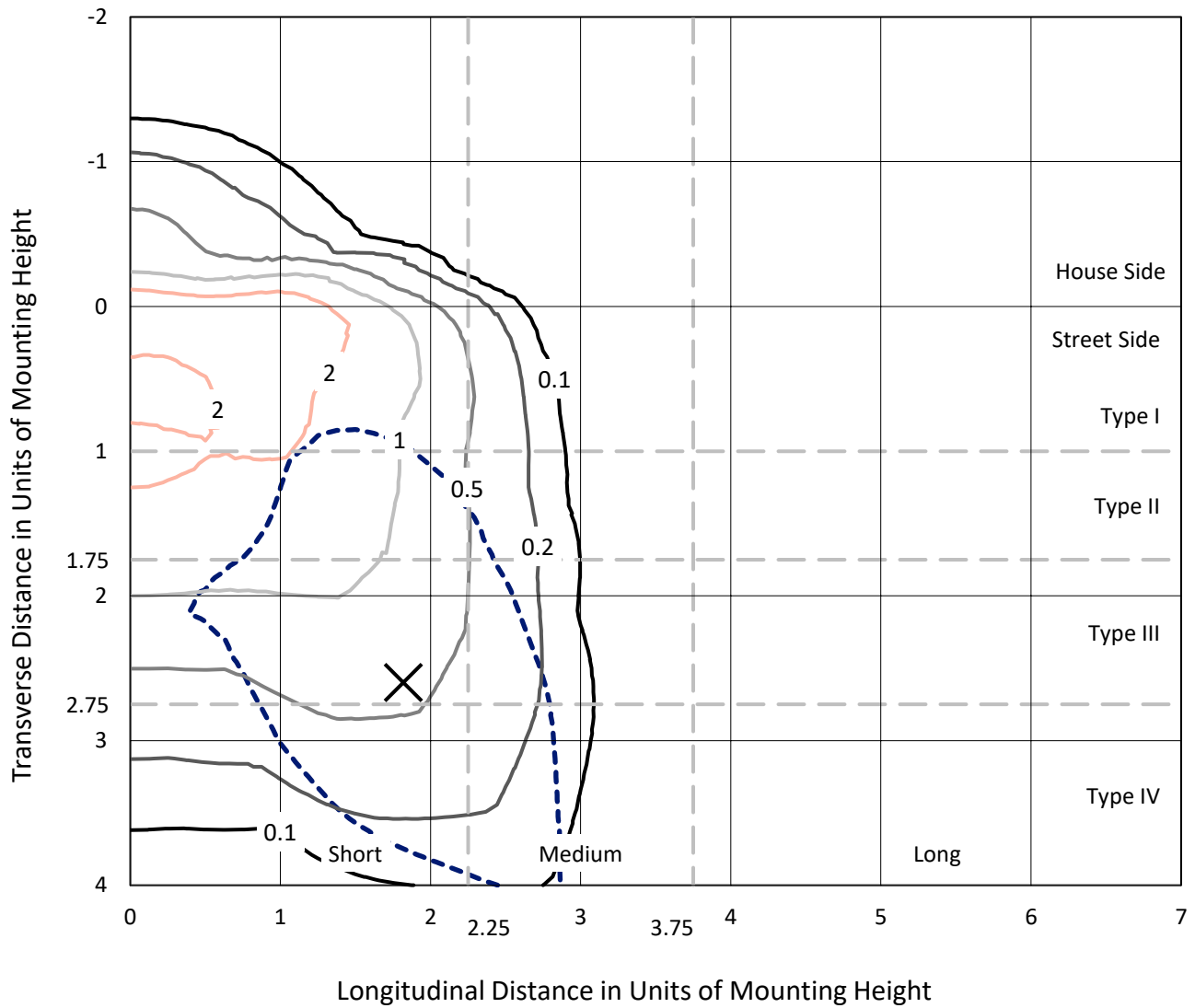
Lumens per Lamp: N/A  
Luminaire Lumens: 13740 lumens  
Efficiency: N/A  
Efficacy: 93.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G3  
  
Input Watts (W): 147.6  
Input Voltage (V): 120.0  
Input Current (Ain): 1.234  
Voltage Rise (V): NR  
Power Factor: 0.999  
Total Harmonic Distortion (THDi): 3.108  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

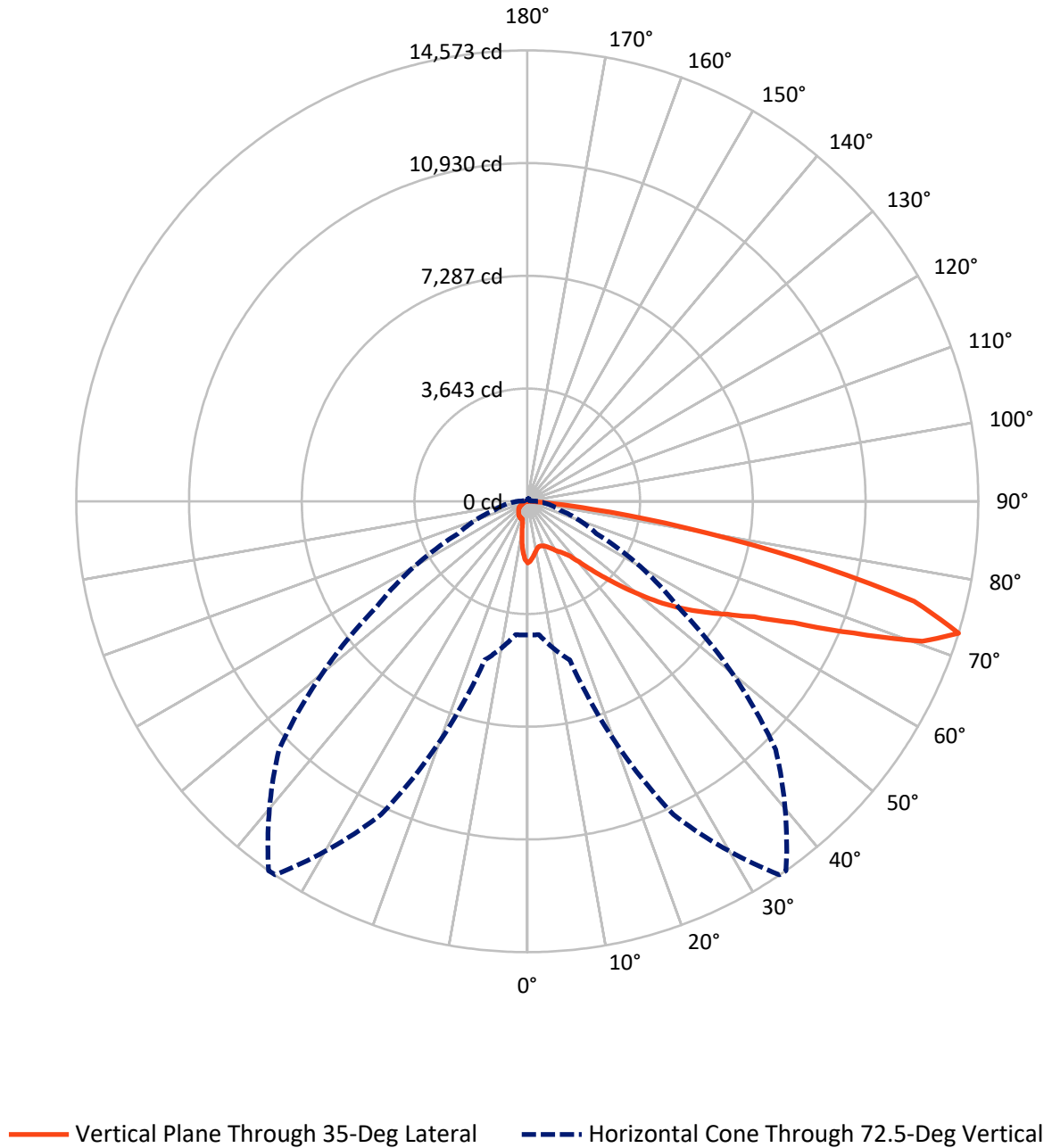
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1546.4	0.0	1546.4
	% Fixture	11.3	0.0	11.3
<b>Street Side</b>	Lumens	12193.6	0.0	12193.6
	% Fixture	88.7	0.0	88.7
<b>Total</b>	Lumens	13740.0	0.0	13740.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	163.6	1.2
10°-20°	382.8	2.8
20°-30°	621.9	4.5
30°-40°	1037.6	7.6
40°-50°	1963.1	14.3
50°-60°	3119.4	22.7
60°-70°	3858.9	28.1
70°-80°	2398.7	17.5
80°-90°	193.9	1.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	13740.0	100.0
0°-180°	13740.0	100.0

**Coefficient of Utilization**



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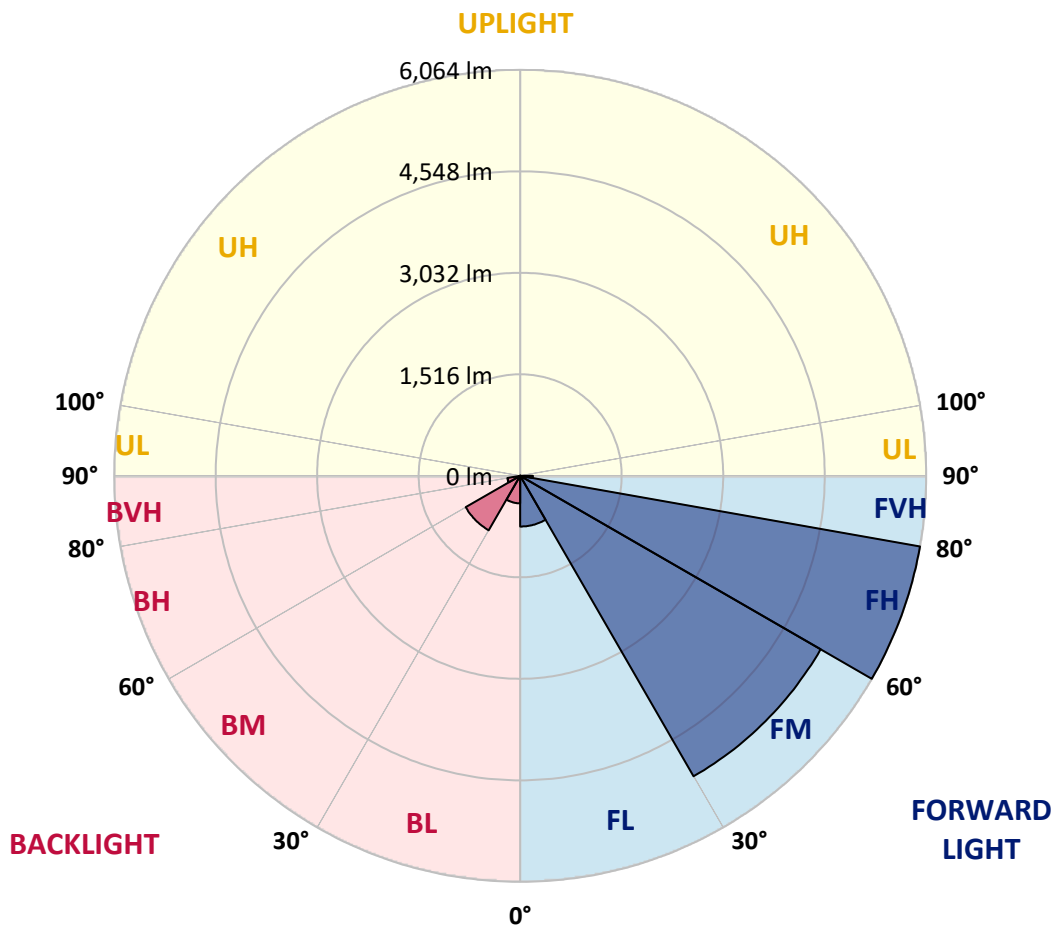
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	757.4	5.5			
FM (30°-60°)	5181.4	37.7			
FH (60°-80°)	6063.6	44.1			G3/7500
FVH (80°-90°)	191.2	1.4			G2/225
BL (0°-30°)	410.9	3.0	B1/500		
BM (30°-60°)	938.8	6.8	B1/1000		
BH (60°-80°)	194.0	1.4	B1/500		G1/500
BVH (80°-90°)	2.6	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G3**

Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	1991.4	1991.4	1991.4	1991.4	1991.4	1991.4	1991.4	1991.4	1991.4	1991.4	1991.4
2.5°	1902.8	1918.9	1921.9	1927.0	1927.0	1933.0	1943.1	1957.2	1980.3	1992.4	2000.4
5°	1753.8	1765.9	1781.0	1793.1	1816.2	1819.2	1858.5	1896.8	1950.1	1990.4	2018.6
7.5°	1603.8	1617.9	1638.0	1667.2	1697.4	1706.5	1765.9	1830.3	1914.9	1990.4	2037.7
10°	1498.1	1499.1	1517.2	1546.4	1594.7	1605.8	1678.3	1769.9	1875.6	1978.3	2055.8
12.5°	1438.7	1445.7	1453.8	1475.9	1522.2	1529.3	1606.8	1714.5	1836.3	1971.3	2077.0
15°	1438.7	1443.7	1448.7	1459.8	1497.1	1503.1	1571.6	1679.3	1816.2	1974.3	2111.2
17.5°	1453.8	1461.8	1457.8	1470.9	1510.2	1514.2	1574.6	1669.2	1815.2	1993.4	2163.5
20°	1490.0	1496.1	1488.0	1496.1	1535.3	1543.4	1605.8	1688.3	1832.3	2026.6	2229.0
22.5°	1547.4	1550.4	1531.3	1537.3	1577.6	1587.7	1660.2	1742.7	1873.6	2080.0	2316.6
25°	1619.9	1625.9	1596.7	1603.8	1642.0	1654.1	1737.7	1824.3	1939.0	2153.5	2428.3
27.5°	1703.5	1706.5	1681.3	1680.3	1729.6	1746.7	1831.3	1924.9	2026.6	2246.1	2569.3
30°	1799.1	1808.2	1784.0	1780.0	1842.4	1856.5	1940.0	2048.8	2155.5	2385.0	2769.6
32.5°	1874.6	1881.6	1867.6	1877.6	1941.0	1952.1	2071.9	2224.0	2357.9	2582.4	3042.5
35°	1983.3	1987.4	1955.1	1973.3	2045.8	2073.9	2252.1	2469.6	2612.6	2830.0	3398.8
37.5°	2377.0	2377.0	2240.1	2150.5	2219.9	2245.1	2498.8	2778.7	2926.7	3162.3	3847.9
40°	2921.6	2912.6	2712.2	2529.0	2519.9	2569.3	2850.2	3168.3	3332.4	3560.9	4353.3
42.5°	3502.5	3488.5	3215.6	3034.4	3004.2	3021.3	3255.9	3648.5	3815.6	4047.2	4896.9
45°	4018.0	4014.0	3764.3	3520.7	3466.3	3520.7	3762.3	4210.3	4330.1	4573.7	5439.6
47.5°	4449.9	4449.9	4267.7	4108.6	4080.4	4112.6	4447.9	4833.5	4822.4	5134.5	5968.1
50°	4947.3	4943.2	4770.1	4701.6	4730.8	4776.1	5237.2	5489.9	5331.8	5685.2	6440.3
52.5°	5295.6	5319.8	5260.4	5249.3	5398.3	5476.8	6038.6	6132.2	5787.9	6207.7	6793.7
55°	5571.5	5599.6	5668.1	5745.6	6032.6	6135.2	6814.8	6741.3	6169.5	6660.8	6997.0
57.5°	5962.1	5921.8	6027.5	6180.5	6644.7	6768.5	7566.9	7316.2	6476.5	7028.2	7019.2
60°	6436.3	6442.3	6460.4	6653.7	7255.8	7414.8	8307.8	7859.8	6673.9	7253.8	6773.5
62.5°	7006.1	7015.2	7052.4	7349.4	8076.3	8226.3	9097.2	8304.8	6764.5	7190.3	6139.3
65°	6966.8	7005.1	7420.9	8436.7	9323.7	9471.7	10018.3	8616.9	6627.6	6610.4	4998.6
67.5°	6346.7	6409.1	7104.8	9735.4	11204.3	11369.4	11131.8	8678.3	6036.6	5140.6	3260.9
70°	5533.2	5555.3	6392.0	10903.3	13382.0	13549.1	12128.5	8002.8	4580.8	2867.3	1460.8
72.5°	4321.0	4326.1	5307.7	11174.1	14563.9	14573.0	11346.3	5940.9	2463.6	1101.4	507.4
75°	3086.8	3056.5	3554.9	9061.9	12813.1	12915.8	8506.2	2786.7	941.3	520.5	252.7
77.5°	1655.1	1688.3	2011.5	5374.1	8851.5	9026.7	4641.2	803.4	479.2	354.4	167.1
80°	511.4	539.6	824.5	2460.5	5013.7	5119.4	1720.6	357.4	334.2	252.7	109.7
82.5°	161.1	167.1	384.6	1034.0	2081.0	2129.3	498.4	202.4	228.5	167.1	64.4
85°	46.3	47.3	171.2	385.6	514.5	524.5	139.9	78.5	130.9	103.7	33.2
87.5°	5.0	16.1	64.4	64.4	45.3	44.3	15.1	17.1	37.3	13.1	6.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1991.4	1991.4	1991.4	1991.4	1991.4	1991.4	1991.4	1991.4	1991.4	1991.4	1991.4
2.5°	1995.4	1996.4	1983.3	1961.2	1937.0	1916.9	1891.7	1871.6	1857.5	1853.5	1860.5
5°	2009.5	2002.5	1965.2	1897.8	1817.2	1747.7	1670.2	1608.8	1568.5	1551.4	1557.5
7.5°	2030.7	2010.5	1929.0	1796.1	1642.0	1505.1	1366.2	1258.5	1190.0	1155.8	1160.8
10°	2048.8	2008.5	1868.6	1649.1	1413.5	1206.1	1018.8	889.0	816.5	782.3	783.3
12.5°	2065.9	2007.5	1790.0	1474.9	1155.8	902.1	727.9	663.5	643.3	636.3	634.3
15°	2098.1	2010.5	1691.4	1275.6	899.0	681.6	618.2	617.1	621.2	619.2	618.2
17.5°	2142.4	2013.5	1579.6	1064.2	693.7	601.0	598.0	607.1	613.1	610.1	609.1
20°	2199.8	2025.6	1460.8	854.7	596.0	580.9	588.0	596.0	601.0	596.0	595.0
22.5°	2280.3	2046.8	1330.9	686.6	564.8	568.8	574.9	583.9	589.0	581.9	580.9
25°	2379.0	2080.0	1203.1	597.0	549.7	554.7	563.8	573.9	579.9	572.9	571.8
27.5°	2506.9	2133.3	1085.3	576.9	534.6	537.6	550.7	565.8	573.9	564.8	564.8
30°	2692.1	2220.9	983.6	585.9	525.5	518.5	536.6	557.7	566.8	558.8	557.7
32.5°	2937.7	2344.8	921.2	600.0	521.5	496.3	513.5	540.6	555.7	550.7	550.7
35°	3259.9	2533.0	897.0	616.1	518.5	473.2	485.3	514.5	540.6	545.7	545.7
37.5°	3650.5	2794.8	904.1	623.2	509.4	454.1	460.1	485.3	519.5	535.6	539.6
40°	4094.5	3099.8	944.3	616.1	499.4	437.9	439.0	458.1	488.3	512.4	520.5
42.5°	4552.6	3456.2	1018.8	590.0	490.3	423.8	420.8	433.9	454.1	471.2	478.2
45°	4988.5	3822.7	1092.3	553.7	479.2	409.8	402.7	407.7	411.8	418.8	422.8
47.5°	5369.1	4080.4	1071.2	520.5	464.1	393.6	381.6	379.6	367.5	366.5	365.5
50°	5631.9	4136.8	951.4	487.3	442.0	375.5	356.4	344.3	323.2	313.1	314.1
52.5°	5715.4	3914.3	777.2	454.1	405.7	351.4	324.2	305.1	278.9	269.8	268.8
55°	5604.7	3478.4	621.2	413.8	355.4	319.1	288.9	263.8	242.6	231.6	231.6
57.5°	5333.9	2923.7	491.3	366.5	302.0	282.9	252.7	227.5	209.4	198.3	196.3
60°	4884.8	2321.6	388.6	310.1	257.7	243.6	212.4	196.3	180.2	167.1	164.1
62.5°	4203.3	1657.1	305.1	245.7	215.4	199.3	181.2	169.1	150.0	131.9	128.9
65°	3280.0	1013.8	235.6	180.2	173.2	165.1	154.0	143.0	119.8	101.7	98.7
67.5°	2068.9	480.2	168.1	135.9	136.9	132.9	127.9	118.8	101.7	85.6	83.6
70°	911.1	232.6	110.7	103.7	101.7	101.7	105.7	102.7	86.6	71.5	68.5
72.5°	310.1	124.8	82.6	78.5	73.5	72.5	88.6	85.6	69.5	55.4	52.4
75°	162.1	83.6	60.4	56.4	44.3	53.4	70.5	66.4	49.3	36.2	33.2
77.5°	105.7	59.4	41.3	36.2	25.2	35.2	52.4	46.3	29.2	18.1	16.1
80°	66.4	39.3	24.2	17.1	12.1	19.1	28.2	20.1	11.1	4.0	3.0
82.5°	35.2	20.1	9.1	6.0	5.0	6.0	7.0	5.0	2.0	0.0	0.0
85°	14.1	7.0	3.0	2.0	1.0	0.0	2.0	1.0	0.0	0.0	0.0
87.5°	5.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)